

	Gel Strength (Bloom)	Viscosity (mPa)	pH	Clarity (%)	Moisture Content (%)	Ash Content (%)
Gel 1 Gelita brand ordnance gelatin	122.5	5.07	5.09	90.0	10.92	0.29
Gel 2 Sigma-Aldrich brand ordnance gelatin	119.0	5.40	5.14	88.3	11.17	0.22
Gel 3 1:1, Gelita : Sigma-Aldrich mix	118.5	5.46	5.12	88.1	11.01	0.27
Gel 4 ISP Texturese 720 (MT720)	256.5	1.26	9.01	85.7	0.48	78.37

**Table 1: Physical and chemical properties of the gelatins used**

Rifle	Pellet	Pellet Shape	Pellet Mass (Grams)	Average velocity (m/sec)	Power (J)
Westlake	Webley Harrier	Rounded	0.81	143	8.3
Westlake	BSA Huntsman	Pointed	1.02	130	8.5
BSA	Webley Hustler	Pointed	0.84	180	13.7
BSA	BSA Huntsman	Pointed	1.02	172	15.0
Weihrauch	Webley Harrier	Rounded	0.81	174	12.2
Weihrauch	BSA Huntsman	Pointed	1.02	168	14.2
Air Arms	Webley Harrier	Rounded	0.81	194	15.3
Air Arms	BSA Huntsman	Pointed	1.02	182	16.9

**Table 2: Muzzle velocity and power for different air weapons with different pellets**

Test	Bone Depth (mm)	Angle (degrees)	Firing Range (m)	Pellet	Pellet dimensions after impact (mm)		
					Width	Length	Height
1	5	0	10	Huntsman	2.5	3.5	<1*
2	10	0	10	Huntsman	11	10	3
7	20	0	5	Huntsman	10	11	3.5
8	20	0	10	Huntsman	11	10	3
9	20	0	15	Huntsman	10	9	4
3	40	0	10	Huntsman	10	9	4
10	10	25	10	Harrier	6	10	6
4	20	25	10	Huntsman	11	11	3
13	30	25	10	Harrier	8	7	4
11	10	50	10	Harrier	7	3	4.5
5	20	50	10	Huntsman	7	3	9
14	30	50	10	Harrier	5.5	5.5	7
12	10	75	10	Harrier	8.5	9	3.5
6	20	75	10	Huntsman	Pellet ejected from gel		
15	30	75	10	Harrier	5.5	4	7

\* Pellet completely deformed and only 3 small fragments retained

**Table 3: Test firing conditions for bone in gel**